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AUTHOR	Yahraes, Herbert
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ABSTRACT

Findings from research investigating the development of competence in young children are summarized in this pamphlet. Characteristics of the competent 6-year-old, derived from the systematic observation of more than 100 children in various settings over a two-year period, are listed. A study aimed at identifying the kinds of experiences regularly associated with excellent or poor development is described and findings related to the child's attention seeking, service procuring, visual information gathering, language environment, aimless time, intellectual functioning, compliance, imitation, and exploratory experiences are discussed. Three major functions which were found to distinguish parents of competent children from other parents (designing the child's world, consulting with the child, and setting limits) are discussed. The importance of the first three years of life in laying the foundation for the development of competence is discussed and the particularly critical period from 6 to 24 months of age is examined in terms of the development of language, curiosity, aptitude in social relations, and intelligence. Two sources of particular stress in child rearing, the child's negativistic stage which occurs between 14 and 24 months and the spacing of children closer than three years apart, are discussed. Three major obstacles that families face in trying to provide optimum child rearing environments are identified and suggestions for overcoming these obstacles are offered. (JMB)

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DEVELOPING A SENSE OF COMPETENCE IN YOUNG CHILDREN

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Division of Scientific and Public Information
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5600 Fishers Lane
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Developing a Sense of Competence in Young Children

by Herbert Yahraes

Burton L. White, Harvard psychologist, has been conducting research for almost two decades on how experiences of various kinds during the first few years of life affect a child's ability to get along in *his* world—and, later, in *the* world. Since 1965, as director of the Preschool Project of Harvard's Graduate School of Education, he has headed a large research attack on this question and is the author of a book for parents on the first 3 years of life. White sees the problem as "how to structure the experience of the first six years of life so as to help each child make the most of whatever potential he was born with." The investigator believes that he now has many of the answers.

The project began with systematic observations—in homes and schools, on playgrounds, and at shopping centers—of more than 100 children over a period of 2 years. The result was a list of behaviors that characterize the competent 6-year-old. Such a child:

- Can get and maintain the attention of adults in socially acceptable ways.
- Uses adults as resources in socially acceptable ways.
- Can express both affection and hostility to adults.
- Can both lead and follow peers, can compete with them, and can express both affection and hostility to them.
- Can express pride in something he has done or is doing or in something he possesses.
- Occasionally acts out a typical adult activity or in other ways expresses the desire to grow up.

All are *social* abilities. The competent 6-year-old also possesses a number of what White terms "nonsocial abilities," among them:

- Linguistic competence
- Intellectual competence, as indicated by the ability (a) to sense dissonance, that is, to note discrepancies in the environment; (b) to anticipate the consequences of whatever is occupying the

child's attention; (c) to deal with abstractions, such as numbers, letters, and rules; (d) to take another person's perspective; and (e) to make interesting associations between something he sees or hears and something from his experience, whether real or imaginary

- Executive abilities, as indicated by the planning and execution of activities requiring several or more steps and by the effective use of resources
- The ability to attend to two things at once—for instance, to concentrate on the task at hand, yet be aware of what's going on.

The investigators found that such abilities characterized not only the competent 6-year-olds in the study but also the most competent of the 3-year-olds. There was, of course, a difference of degree, the various abilities being significantly more advanced in the older children. In order to study the emergence of competence, the research team gave priority to the first 3 years of life, in particular, to the second and third years. Buttressing this decision were the findings by a number of researchers: A given group of children, regardless of social class or race, performs much the same as another on developmental tests until about 18 months. Afterward, the averages of some groups begin to decline. In other words, many children do well on developmental tests during their first year and a half, yet enter school with a handicap most of them never overcome.

To learn what kinds of experiences are regularly associated with excellent or poor development, White and his associates selected 39 families with children who were either 1 or 2 years old. There were two groups of families, chosen on the basis of how the older children in the families had turned out. Families having highly competent older children, the investigators predicted, would rear their new children very successfully; the other families, rather poorly. The new children in the first group were designated *A* children; those in the second, *C*. All were carefully observed in their homes for 2 hours every other week. For 19 of the children, the observations were made during the 12–15-month and the 18–21-month periods; for the others, during the 24–27-month and the 30–33-month periods. On five widely spaced days during each of these periods, the investigators also made a more intensive study of the children's experiences. They recorded what each child did, second by second, during three 20-minute periods in each of these days.

During the 12–15-month period, the most competent children at 3 years had almost twice as much social experience as the others. Important elements of this experience were seeking the attention of someone else, usually the mother, and procuring a service, usually from the mother. The latter was taken to be evidence of the ability to use an adult as a resource.

On nonsocial tasks, the most competent children spent 20 percent of their waking time staring at objects, people, and scenes. The investigators describe this activity as *gaining information visually*. The

less competent children engaged in this activity only half as much. The most competent children also had considerably more live language directed to them and overheard more live language. In fact, one of the main differences between the two groups was the extent to which the mother or some other adult talked to the children. When children were between 12 and 15 months old, for example, the top five in overall competence were talked to about three times as much as the bottom five.

Six months later, between 18 and 21 months, those children who would turn out to be the most competent at age 3 spent significantly more time than the others in trying to please another person, generally the mother, and in preparing for an activity. The most marked difference between the two groups of children during this period, though, was in the proportion of empty time—"time spent in desultory scanning or aimless wandering." The poorly developing children spent 26 percent of their time in such behavior; the others, 11 percent. The researchers suggest that the difference can be explained by restrictive parental practices in the poorly developing group; for example, the mothers of these children tended to confine them to playpens.

The children were tested for general development at 12 and 24 months, and for intellectual function at 36. At 1 year the difference between the A and C children, as had been expected, was not significant. At 2 years, however, the A children performed significantly better than the C's. Two factors in particular seemed to differentiate the two groups. On a ratio of compliant to noncompliant behavior in response to adults' orders or suggestions, the A's rated higher. They also imitated adults in their environment—usually the mothers—more frequently. The investigators view this finding as evidence that, even at the age of 2, some children demonstrate a stronger desire to grow up and be like an adult.

At 36 months, the median for the A's on the Stanford-Binet test of intelligence was 128; for the C's, 92. Such a large difference could be expected to occur by chance only once in a thousand times.

Good overall development, or competence, at the age of 3 was found to be associated with high scores in the following activities during the 12–15-month period:

Procuring a service
Gaining attention
Gaining information through steady staring at people and objects
Listening to live language (or, put another way, being talked to)

Also related to competence were *low* scores in gross motor activity, passing time, and exploratory experiences, mainly with small objects. (Why should exploratory experience be associated with lower competence? The investigators suggest that the finding may reflect the absence of other experiences that would have been more efficacious.)

When the children were 5 years old, they were given another IQ test—the Wechsler Preschool and Primary Scale of Intelligence, which at

5 has been found to predict future academic achievement. The relations between types of experience at 12–15 months and IQ scores at 5 years were found to be almost the same as they had been at 3.

How the Parents Can Help

Was the development of competence influenced by parental action or lack of action? It certainly looks that way, the investigators answer. Effective parents, defined as parents of competent children, performed three major functions in a way that distinguished them from other parents:

Designing the child's world. The effective childrearer made the living areas as safe as possible for the child who had started to crawl or walk and then provided maximum access to it.

> Such action immediately sets the process of development off in a manner that will lead naturally to the satisfaction of and further development of the child's curiosity; the opportunity to learn much more about the world at large; and the opportunity to enter into natural, useful relationships . . . . The effective childrearer [also] makes kitchen cabinets attractive and available and then keeps a few materials in reserve for times when the child may become bored.

Consulting with the child. Effective parents "were available to the child several hours each day to assist, enthuse, and soothe when necessary . . . . They would usually respond promptly [to overtures] . . . They would pause to consider the baby's *purpose of the moment.* They would provide what was needed *with* some language, on target and at, or slightly above, his level of comprehension. They . . . would not prolong the exchange longer than the baby wanted." Such exchanges, taking from 20 to 40 seconds, occurred "dozens of times a day in the lives of children developing well."

Setting limits, or disciplining the child. "Though loving and encouraging and free with praise [effective parents] were firm. *No matter how young the infant, they set clear limits* . . . . " The investigators report also:

> Different kinds of discipline seem necessary at different stages of infancy and toddlerhood, and a minority of childrearers in some fortunate way have stumbled across ways that work. Children between 8 and 13 months of age can usually be controlled through distraction tactics. Children 13 to 18 months of age require distraction and physical removal from circumstances at times; and children between 18 and 24 months require distraction, physical removal, and verbal restrictions.

These findings are being tested in an experimental program to learn if the general run of parents can be taught the childrearing skills used by the parents of the most competent children in the Harvard study.

A research group at the Center for Early Development and Education, University of Arkansas, has reached similar findings from a study of children over the 6-to-54-month period. In its observations of children and their environments, this team used a schedule of 45

items—developed by Bettye Caldwell, the Center's director, and her associates—grouped as follows:

Emotional and verbal responsivity of the mother
Maternal involvement with the child
Provision of appropriate play materials
Avoidance of restriction and punishment
Organization of the physical and temporal environment
Opportunities for variety in daily stimulation

None of those factors was found to relate in any important way to the children's performance on mental tests at 6 months and 12 months. But all of them related significantly to performance on such tests at 3 years and at 4½ years. At the latter age, the relationship between the first three factors and intelligence was particularly strong.

According to the Arkansas investigators: "The data obtained after 12 months of age seem to indicate that perhaps the most enriching environment experienced by the children in our sample may be characterized as those in which a mother (or some other primary caregiver) provided the infant with a variety of age-appropriate learning materials and who likewise consciously encouraged developmental advances by talking to, looking at, and otherwise positively responding and attending to her child."

Statistical treatment of the Harvard group's results showed that 25 percent of the differences between the A and C children could be accounted for by differences in social class. The influence of these differences was limited almost entirely to what the team calls "nonsocial competence," which in this research includes mainly intelligence and linguistic ability. These factors correlated highly with social class, suggesting that the higher the social class of the child's family, the more likely it was that the child scored high.

There were notable exceptions, however. Of five children who the investigators thought would develop unusually well because of their siblings' records, one came out 22nd of the 39, one came out last, and the other three fell in between those two. Further, one child who was expected to develop rather poorly ranked 10th in overall competence at the age of 3.

The correlation between social class and overall competence, including both social and nonsocial factors, was moderately high.

A Particularly Critical Period

From the research described in the preceding section, the Harvard group has additional findings that should help parents raise competent children.

The most important years of the child's life, this group reports, are the first 3, because it is then that the foundations are being laid for the development of language, curiosity, aptitude in social relations, and intelligence. Says White: "I honestly cannot think of any task more exciting and more valuable that any of us do in our daily work

than the task of providing an early education for one's child under three years of age." One part of this period is particularly critical. It begins at 6-to-8 months of age, when most children "first undergo unusually supportive experiences," and runs to about 24 months of age, by which time the effects, whether good or bad, "have become solidly established." (White acknowledges that the effects of bad experiences during the child's earliest years can indeed be reversed, as other investigators have found, by changing the environment. But the needed changes are not usually made.)

The beginning of this period coincides with the start of the child's efforts to move about and also with the emergence of the ability to understand language. Nurturing this ability is particularly important for building the child's educational capacity.

Then, toward the end of the first year, "babies begin to reveal a growing awareness of themselves... as beings with separate identities. The form of this identity appears to be shaped largely through social interactions with the primary caretaker. These interchanges also appear to shape the infant's basic orientation toward people in general.... He seems to be acquiring his basic style as a social animal." However, whether children score 90 or 115 on tests of developmental status during the first year "doesn't seem to tell us much about levels of function at age three and up."

As early as the 12-15-month period, "and increasingly thereafter, the environments of the A and C child differ markedly.... Mothers of A children interact more with them, engage in more intellectually stimulating activities with them, teach them more often, encourage them more often, initiate activities for them more often, and are more successful in controlling their children."

"The most important implication of these findings," the researchers point out, "is that *children who later grow up to be exceptionally competent intellectually do not seem to become so because of innate capabilities only. Starting as early as one year of age, these children have daily experiences in their home that systematically promote their development*" [emphasis added]. Particularly important are the developments in language, curiosity, social competence, and intelligence.

The mothers most likely to develop competent children are those who encourage the growth of language "by careful selection of suitable words and phrases and by exploiting the child's interest of the moment." Other mothers "provide a great deal of input but with considerably less skill and effectiveness." And still others show "minimal attention to the language interests of their children."

Another major element that develops during the first 2 years is curiosity. "Even if a child comes from a miserable home and is beaten regularly," White notes, "it is very difficult to stamp out strong, basic, simple, pure curiosity during the first eight or nine months of life." He continues:

> It is, unfortunately, not that difficult to stamp it out in the next year or two or, if not stamp it out, suppress it dramatically or move it over into

aberrant patterns. For example, the two-year-old who looks at a new toy and, unlike other two-year-olds, only sizes it up to see how he can use it to badger his mother: that is not sheer, unqualified curiosity.

The third major element in the foundation of competence is social development. Says White: "We know that human beings will not survive without some sort of strong, protective attachment to an older, more mature, more capable human.... Between 8 months and 24 months or so, one of the most gorgeous experiences you will ever see takes place: children establish a relationship, usually with the mother. They learn thousands of things about what they can and cannot do in their home, what they can and cannot do in interactions with the primary caretaker, about how to read the primary caretaker's different mood states, and an incredible number of other things."

During those first 2 years a human personality is being formed. The social patterns acquired then, through interactions with the mother and other members of the family, are the ones that will be applied during the next few years to other adults and to children who come into the home.

The fourth major element is the development of intelligence. "From late in the first year," White points out, "children are very much interested in cause-and-effect relationships." They flip light switches on and off to see the consequences, and they delight in working with jack-in-the-boxes. Though such events seem trivial, "they indicate a very deep interest in how things work" and in other characteristics of objects.

Sources of Stress: Negativism and Closely Spaced Children

During the course of the research, White confirmed what other researchers had reported and observant mothers well know—for a period during the second year of life children are inclined to be negativistic. During that time, "our subjects begin asserting themselves, rejecting suggestions, ignoring commands, testing limits, and generally flexing their muscles." Often the child seems to refuse to cooperate with his mother just for the sake of refusing. "Some mothers cope well with this normal phenomenon," the investigator reports, "others not so well." White coped with it by temporarily halting most tests.

The negativistic period is likely to begin somewhere after the 14th or 15th month and to end with the 24th month, though it may continue for a while. The likelihood that a child will comply with a request by his or her mother falls to less than 50 percent during this time—although the child was largely compliant as a 1-year-old and probably will be again during the third and fourth years.

Negativism seems to be triggered by what White calls a "sense of agency," or the child's realization that he, too, can exert power. Since the child has to go "from total dependence to a stance from

which he can face reality on his own," the last half of the second year may represent a stage at which some major step in the process takes place. "A second comparable step," White points out, "seems to occur at puberty and takes the form of adolescent rebellion."

At times during the negativistic period it will be impossible to dissuade children from something they are doing, "especially if it is something that they see their mother disapproves of." So what can a mother do? The investigator—whose research convinces him that a strong link exists between firm discipline and competent children—replies: "Firm discipline is still strongly advised but because it is clear that there are very great pressures [on the child during this period] occasionally to contest and to win over authority, *I believe wise parents are well advised to yield occasionally to the child in areas where the stakes are not particularly high (from the parents' point of view).* This does not mean that I advocate a general permissiveness or a general abdication of responsibility for controlling the home. The parents we have watched doing an apparently effective job with their children *never* abdicate their control in this regard; but they are wise enough and personally secure enough to occasionally let the child win a minor struggle at this particular stage of life. . . . "

Though negativism is a source of great stress to many mothers, far and away the stress most difficult to deal with during the first 3 years is "the behavior of a not-much-older sibling." Frequently, though not invariably, White has found that "when children are spaced less than three years apart, families pay a significant price." As he explains the situation: "A first child reared at home lives (usually) in a loving, protective atmosphere for most of his first two years. He rarely comes face to face with aggression or hostility. In contrast, a second child with a sibling a year or a year and a half older inevitably must cope with such forces day after day, once he begins to crawl about. . . . Mothers often find themselves into at least 12 months of chronically unpleasant policing activities. . . . "

On behalf of a first child who is only 1½ years old when the baby is born, White points out that he is still mother-oriented. It is very difficult for him to have to share the center of his life with the newcomer, particularly since the newcomer seems to be getting most of the mother's attention. Consequently, when the new baby begins to crawl and get into things, the mother may find herself spending vast amounts of energy and time simply trying to keep peace.

Preventing Early-Life Failure

Failures in the development of language, curiosity, social skill, and intelligence—the major foundations of competence—"are extremely difficult to correct, using any means we now have available," and lead to underachievement or failure in school. As evidence, White notes that "children who enter the first grade significantly behind their peers are not likely ever to catch up." Also, the Head Start program, which has concentrated on helping children in the 3-5-age period,

"does not often succeed in its prime goal," the prevention of educational failure.

Families who want to do the best they can for their children, in White's view, face three major obstacles. The first is parental ignorance of the process of child development. The second, stemming in part from the first, is parental stress, particularly when the child enters the negativistic period and starts determining how much he can get away with. The third major obstacle is lack of assistance.

This investigator has a number of suggestions for meeting that situation:

1. Teach all prospective parents—through required courses in high school and through television—about human development in the first years of life. ("Our current educational policy is grossly inadequate," he says, because it largely ignores the family, which he considers the most important educational factor in a child's life. He believes that most people will acquire good parenting skills only if they are trained in them.)
2. Offer adult education courses for pregnant women and their husbands. "Perhaps provide video-cassette or filmed mini-courses in hospitals during the lying-in-period," as is being done in Hawaii and has been done, though rarely, elsewhere.
3. Provide a low-cost detection and referral service to every family, starting when a child is born, with a promise that the children of participating families "will not go through the pre-school years with an undetected educational handicap."
4. Establish a neighborhood resource center to make available "continuing, low pressure, strictly voluntary training for parents." This resource center might, among other activities, lend books, pamphlets, and toys to parents; make professionals available to talk with parents; provide free babysitting a few hours each week for parents' psychological relief; and carry out a home-visiting program, under which parents could elect to have a child guidance worker come to the house—once every 6 or 8 weeks, say—to observe the child and talk over problems.

In large part because of the Harvard Pre-School Program, a neighborhood resource center such as White recommends is already in operation in Brookline, Mass., a Boston suburb, as part of the Brookline Early Education Project, or BEEP. The project had its beginnings one day several years ago in a conversation between White and the Brookline superintendent of schools. "When I get a child in the first grade who already looks weak," the superintendent said, "I cannot do much for him, even though I have one of the best special education programs in the country." He thought that probably all children should enter school at 4.

White told him that 4 was too late, because even by 3 a child's learning capability has been largely established. "Take a look at what is going on in the first six years, not just in the fifth year," White

advised. "Try to get at the origin of educational deficits; try to prevent them, and try to help earlier in the game."

As a result, in Brookline a teacher-consultant from the public school system goes into the homes of newborn babies—if the family has volunteered for the program—and helps the parents from the very beginning to raise competent and emotionally healthy children. The teacher-consultant works with the parents until the child is 5. Also, mothers and fathers are free to drop into the resource center where they may borrow books, pamphlets, and toys, exchange experiences and problems with other parents, and seek advice.

Although the results are not yet known, White would be willing to advise any school system to undertake a similar program now.

Dr. Donald Pierson, BEEP's director, believes that the public school system should educate parents to be their children's first teacher. He suggests that elementary schools could begin doing so by lending parents books on child development, establishing a toy-lending library, and providing physical examinations and developmental testing of young children. Pierson suggests also that high school students be given credit for working with children in a program like BEEP's.

It is clear that the first 3 years of life are extraordinarily important to the healthy mental and emotional, as well as physical, development of the child. Parents can and should do much to make them productive years, for the child's experiences during that period will determine to a large degree how well he or she will be emotionally and intellectually prepared for school and the experiences associated with it.